No. 9000177

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

South Carolina Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT TY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COWPEA

'Clemson Purple'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 30th day of July in the year of our Lord one thousand nine hundred and ninety-three.

Attest:

Kenneth A. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

FORM APPROVED: OMB 0581-0055, Expires 1/31/91

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
South Carolina Agricultural Experiment Station

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.
SC 85-219-VR

3. VARIETY NAME
Clemson Purple

4. ADDRESS *(street and no. or R.F.D. no., city, state, and ZIP)*
104 Barre Hall
Clemson University
Clemson, SC 29634-0351

5. PHONE *(Include area code)*
803-656-3140

FOR OFFICIAL USE ONLY

PVPO NUMBER
9000177

FILING
Date: May 18 1990
Time: ☐ A.M. ☑ P.M.

FEES RECEIVED
Filing and Examination Fee: $ 2150
Date: May 18, 1990
Certificate Fee: $ 250.00
Date: July 26, 1993

6. GENUS AND SPECIES NAME
Vigna unguiculata

7. FAMILY NAME *(Botanical)*
Fabaceae

8. CROP KIND NAME *(Common Name)*
Cowpea

9. DATE OF DETERMINATION
Nov. 23, 1988

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*
State Agricultural Experiment Station

11. IF INCORPORATED, GIVE STATE OF INCORPORATION

12. DATE OF INCORPORATION

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
G. Michael Watkins
S. C. Foundation Seed Association
Cherry Road, Clemson University
Clemson, SC 29634-9952

PHONE *(Include area code)*: 803-656-2520

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow INSTRUCTIONS on reverse)*

a. ☒ Exhibit A, Origin and Breeding History of the Variety.
b. ☒ Exhlbit B, Novelty Statement.
c. ☒ Exhibit C, Objective Description of Variety.
d. ☒ Exhibit D, Additional Description of Variety.
e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.
f. ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office _____.
g. ☒ Filing and Examination Fee ($2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See section 83(a) of the Plant Variety Protection Act.)*
☐ YES *(If "YES," answer items 16 and 17 below)* ☒ NO *(If "NO," skip to item 18 below)*

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
☐ YES *(If "YES," through* ☐ Plant Variety Protection Act ☐ Patent Act. Give date: _____.)
☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☒ YES (If "YES," give names of countries and dates)
☐ NO

Released by the S. C. Agr. Exp. Sta. (USA) 1988.
Seed offered for sale March 1990 to home gardeners by S. C. Foundation Seed Association.

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *[Owner(s)]*	CAPACITY OR TITLE	DATE
	Director, SC Agricultural Experiment Station	May 15, 1990
SIGNATURE OF APPLICANT *[Owner(s)]*	CAPACITY OR TITLE	DATE

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed Exhibits A,B,C,E; (3) at least 2,500 viable untreated seeds; (4) check, drawn on a U.S. bank, payable to "Treasurer of the United States" in the amount of $2,150 ($250 filing fee and $1,900 examination fee). *(See section 180.175 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for 30 days, then returned to the applicant as unfiled. Mail application and other requirements to: Plant Variety Protection Office, AMS, USDA, Rm. 500, NAL Building, 10301 Baltimore Blvd., Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the Application are self-explanatory unless noted below. Corrections on the Application form and Exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a Certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $250 for issuance of the Certificate.

Plant Variety Protection Office
Telephone: 301/344-2518

ITEM

9. Give the date when there has been at least a tentative determination that the variety has been sexually reproduced with recognized characteristics, whether or not the novelty of those characteristics has been determined. *[See section 41(d) of the Plant Variety Protection Act (Act).]*

14a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability. *(See sections 41 and 52 of the Act.)*

14b. Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons which clearly indicate novelty.

14c. Exhibit C forms are available from the PVPO; specify crop kind. Fill in the Exhibit C (Objective Description of Variety form) to describe your variety.

14d. Optional additional characteristics and/or photographs: Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.

14e. Section 52(4) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. The applicant may be the actual breeder, the employer of the breeder, the owner through purchase or inheritance, etc.

15. If "Yes" is specified *(seed of this variety be sold by variety name only as a class of certified seed)*, the applicant may **NOT** reverse this affirmative decision after the variety has either been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified the applicant may change the choice. *(See section 180.16 of the Regulations and Rules of Practice.)*

19. See sections 41 (i, j) and 42 of the Act and section 180.7 of the Regulations and Rules of Practice for eligibility requirements.

NOTES:

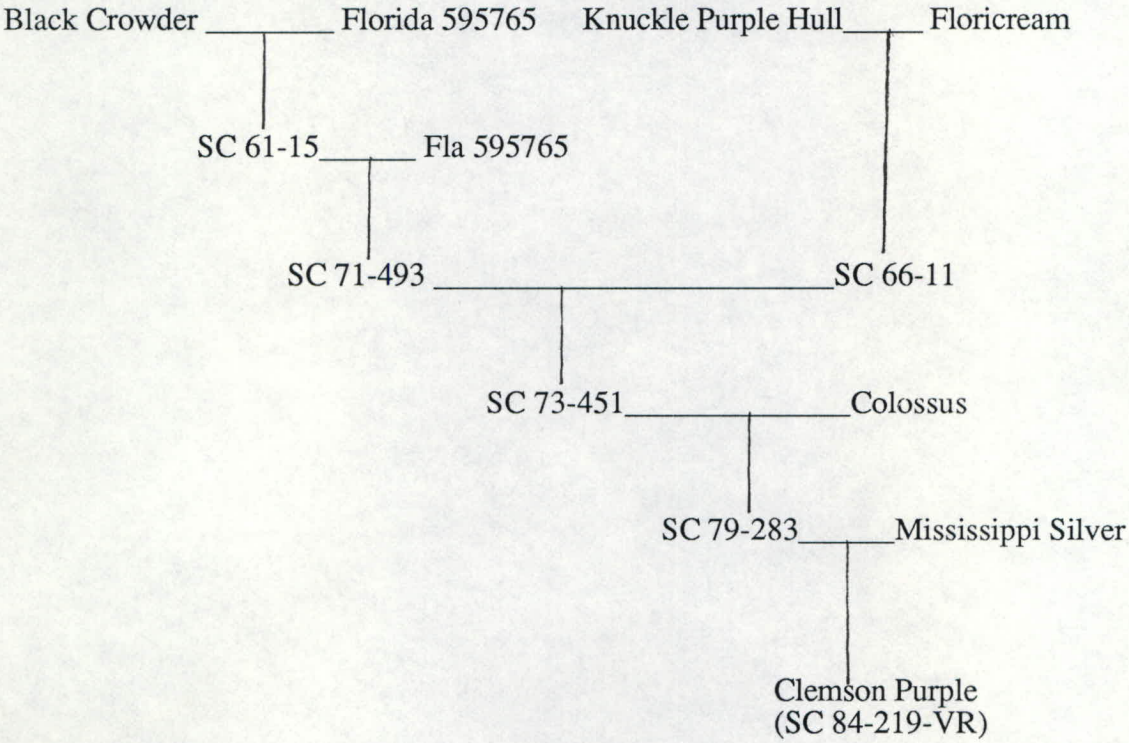
It is the responsibility of the applicant/owner to keep the PVPO informed of any change of address or change of ownership or assignment during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment is $25. *[See section 101 of the Act, and sections 180.130, 180.131, 180.132, and 180.175(h) of the Regulations and Rules of Practice.]*

To avoid conflict with other variety names in use, the applicant should check the variety names proposed by contacting: Seed Branch, AMS, USDA, Rm. 213, Building 306, Beltsville Agricultural Research Center -- East, Beltsville, MD 20705. Telephone: 301/344-2089.

EXHIBIT A

ORIGIN AND BREEDING HISTORY OF CLEMSON PURPLE

The parentage of Clemson Purple is presented in diagrammatical form as follows:



The original cross in the development of this variety was made in the fall of 1959 and involved Black Crowder and Florida 595765, a very large seeded crowder, obtained from the University of Florida and one of the original parents of Colossus. Fla 595765 was backcrossed to a large-seeded progeny resulting from this cross in the F_2 generation and ultimately led to SC 71-493, a brown podded pure line that was larger than either of its parents.

The purple-pod color found in Clemson Purple was derived from Knuckle Purple Hull when Floricream was used as the pollen parent. This cross resulted in a purple pure line, SC 66-11, a medium sized crowder. Crossing SC 66-11to SC 71-493 led ultimately to pure line SC 93-283 a very large seeded crowder with purple pods that were indiscernable from Knuckle Purple Hull in color. Unfortunately SC 79-283, like Knuckle Purple Hull, was extremely susceptible to Blackeye Cowpea Mosaic Virus (BlCMV), a very destructive disease of cowpeas in South Carolina.

BlCMV resistance was derived from Mississippi Silver. Crossing this variety with SC 79-283 resulted in Clemson Purple. Clemson Purple combines the rich purple pod color of Knuckle Purple Hull, the very large seed size of Fla 595765 and Colossus and the resistance of Mississippi Silver to BlCMV and root knot nematodes.

After eight generations of selfing, SC 85-219-VR reached purity and no variants have been identified to date in the breeder or foundation seed of Clemson Purple.

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EXHIBIT B

CLEMSON PURPLE NOVELTY STATEMENT

Knuckle Purple Hull is more similar to Clemson Purple than any other previously existing variety. However, these two varieties do differ in 2 major characters. First, Clemson Purple is highly resistant to blackeye cowpea mosaic virus (BlCMV) and Knuckle Purple Hull is susceptible. Secondly, the fresh green pea size of Clemson Purple is larger than Knuckle Purple Hull. In other characters such as habit of growth, flower color, pod color, pea color and pea shape, these varieties are very similar.

Proving BlCMV Resistance

Virus inoculation was accomplished by dusting newly opened primary leaves of two-week old seedlings with 600 mesh corundum and applying ground leaf tissue from BlCMR infected stock plants and rubbing lightly with a gauze pad. Plants were inoculated twice, 1 or 2 days apart. Virus in the inoculated seedlings was detected by examining the trifoliate leaves for BlCMV symptoms[1] and testing trifoliate leaf disks for BlCMV infection with double antibody sandwich, direct enzyme-linked immunosorbent assay (ELISA).[2] A series of 3 greenhouse studies were conducted in 1984 and 1985. The

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[1]Ogle, W. L., W. Witcher and O. W. Barnett. 1987. Descriptors for the southern peas of South Carolina. S.C. Agr. Exp. Sta. Bul. 659, pp. 6-7.

[2]McLaughlin, M. R., O. W. Barnett, P. M. Burrows and R. H. Baum. 1981. Improved ELISA conditions for detection of viruses. J. Virol. Meth. 3:13-25.

results obtained from these inoculation studies are presented in Table 1.

The results of these experiments show clearly that Clemson Purple is resistant to BlCMV as evidenced by the lack of any BlCMV symptoms on the trifoliate leaves and the absence of infection in all plants in all three experiments. It is also clear that Knuckle Purple Hull is highly susceptible to BlCMV since practically all the plants were showing BlCMV symptoms and infection of the trifoliate leaves in all experiments. The occasional plant that did not show symptoms or infection was probably a susceptible escape.

Proving Size Difference

Three replicated field experiments were conducted to determine differences in green shell pea size and yielding ability among 10 varieties of southern peas. Size was determined by weighing 100 freshly picked and freshly shelled green peas and recording the weight in grams per 100 peas. Since size of peas is quantitative in nature, the data obtained was analyzed by analysis of variance according to Snedecor.[1] The results obtained from these experiments are presented in Table 2.

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[1] Snedecor, G. W. Statistical Methods. The Iowa State College Press, Ames, Iowa. 4th Edition. 1946

Table 1. The influence of inoculation with BlCMV on disease reaction for 2 southern pea varieties.

Variety	October 2, 1984	
	No. of plants showing:	
	Symptoms	No Symptoms
Knuckle Purple Hull	26	2
Clemson Purple	0	30
	Infection	No Infection
Knuckle Purple Hull	27	1
Clemson Purple	0	30

	February 5, 1985	
	No. of plants showing:	
	Symptoms	No Symptoms
Knuckle Purple Hull	28	1
Clemson Purple	0	27
	Infection	No Infection
Knuckle Purple Hull	28	1
Clemson Purple	0	27

	March 18, 1985	
	No. of plants showing:	
	Symptoms	No Symptoms
Knuckle Purple Hull	27	0
Clemson Purple	0	29
	Infection	No Infection
Knuckle Purple Hull	27	0
Clemson Purple	0	29

Table 2. The effect of variety on size of green-shell peas.

Cultivar	Total Weight in Grams of 100 Fresh Green Peas		
	1985	1986	1987
1. Clemson Purple	72.3*	76.1*	73.1*
2. Colossus	77.5	78.7	81.9
3. Dixielee	48.7	53.2	49.6
4. Hercules	84.6	91.9	86.2
5. Knuckle Purple Hull	57.9*	60.7*	56.4*
6. Magnolia Blackeye	34.8	39.6	37.0
7. Mississippi Purple	52.0	55.3	49.1
8. Mississippi Silver	50.7	54.8	48.9
9. Pinkeye Purple Hull	39.1	43.5	41.3
10. Purple Tip Crowder	49.4	47.4	45.7
*LSD @ 5%	12.6	14.5	11.3

These results show that green shell pea size of Clemson Purple was significantly larger than Knuckle Purple Hull in each of these experiments conducted in 1985, 1986, and 1987.

Knuckle Purple Hull was described by Isbell[1] in 1959 and has been grown continuously in South Carolina at least since 1957. Unfortunately this variety is very susceptible to BlCMV and yields have declined over a period of years, especially in seasons and geographic areas when and where BlCMV was a problem.

[1]Isbell, C. L. 1959. Southern table peas. Ala. Agr. Exp. Sta. Bul. 317.

FORM APPROVED OMB NO. 40-R3712

FORM GR-470-4
(7-76)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
(Cowpea)

INSTRUCTIONS: See Reverse

NAME OF APPLICANT(S)	VARIETY NAME OR TEMPORARY DESIGNATION
	Clemson Purple
ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code)*	FOR OFFICIAL USE ONLY PVPO NUMBER 9000177

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less.

1. PLANT HABIT AT GREEN SHELL STAGE: [2]
1 = ERECT 2 = SEMIERECT 3 = PROCUMBENT 4 = PROSTRATE

2. PLANT SIZE: [5][3] CM. HIGH AT MATURITY

3. STEM COLOR: [1]
1 = GREEN 2 = PURPLE

4. NODE COLOR: [2]
1 = GREEN 2 = PURPLE

5. FOLIAGE: [2]
1 = OPEN 2 = COMPACT

6. LEAF COLOR (See Reverse): [2]
1 = LIGHT GREEN 2 = MEDIUM GREEN 3 = DARK GREEN

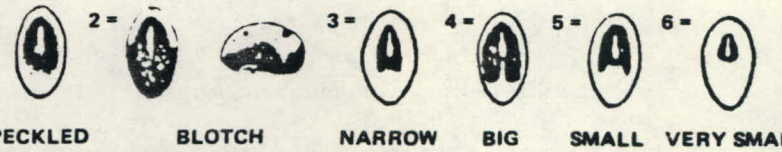
7. LEAF SURFACE:
[1] 1 = SMOOTH 2 = BLISTERED
[2] 1 = DULL 2 = GLOSSY

8. FLOWER COLOR (See Reverse) [1]
1 = PURPLE 2 = LAVENDER 3 = TINGED 4 = WHITE

9. FIRST FLOWERING [4][8] NUMBER OF DAYS

10. POD:
[2] PLACEMENT: 1 = BELOW FOLIAGE 2 = ABOVE FOLIAGE 3 = AT FOLIAGE LEVEL
[2] LOCATION: 1 = SCATTERED 2 = BUNCHED
[1][7] CM. LONG [1][3] MM. WIDE
[1] CURVATURE: 1 = STRAIGHT 2 = CURVED
[3] CONSTRICTIONS: 1 = NONE 2 = SLIGHT 3 = DEEP
[2] SURFACE *(Green shell maturity)*: 1 = DULL 2 = GLOSSY
[4] COLOR *(Green shell maturity)*: 1 = SILVER-GREEN 2 = GREEN 3 = LIGHT PURPLE 4 = DARK PURPLE
[4] COLOR *(Dry maturity)*: 1 = WHITE 2 = STRAW 3 = DRAB 4 = PURPLE
[2] CROSS SECTION *(Green shell stage-width/height)*: 1 = (1: <) 2 = (1: >) 3 = (1:1)

11. SEED:
[1][6] NUMBER OF SEEDS PER POD
[3] SHAPE *(See Reverse)*: 1 = KIDNEY 2 = OVATE TO OVOID 3 = CROWDER 4 = GLOBOSE 5 = RHOMBOID
[8.3] MM. LONG
[7.8] MM. WIDE
[6] HILAR EYE TYPE:



SPECKLED BLOTCH NARROW BIG SMALL VERY SMALL

[2][5][6] GM. PER 1000 SEEDS

[2] COAT: 1 = WRINKLED 2 = SMOOTH
[1] COLOR PATTERN: 1 = SINGLE COLOR 2 = PATTERNED 3 = MARBLED 4 = SPECKLED

[8] PRIMARY COLOR *(Single color or basic color)*: 1 = PURPLE 2 = BLACK 3 = DULL BLACK 4 = BLUE 5 = RED 6 = COFFEE 7 = MAROON 8 = BUFF OR CLAY 9 = PINK 0 = WHITE

SECONDARY COLORS PRODUCING THE PATTERN, MARBLING OR SPECKLING (Enter a zero in boxes where the colors do not identify the secondary colors.):

[ ] 1 = PURPLE [ ] 2 = BLACK [ ] 3 = DULL BLACK [ ] 4 = BLUE [ ] 5 = RED
[ ] 6 = COFFEE [ ] 7 = MAROON [ ] 8 = BUFF [ ] 9 = PINK [ ] 0 = WHITE

7

FORM GR-470-4 (REVERSE)

9000177

12. DISEASE (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

2 FUSARIUM WILT	2 ROOT KNOT NEMATODE	0 CHARCOAL ROT	0 ZONATE LEAF SPOT
0 RED LEAF SPOT	0 POWDERY MILDEW	1 COWPEA CHLOROTIC MOTTLE VIRUS	1 SOUTHERN BEAN MOSAIC VIRUS
0 BEAN YELLOW MOSAIC VIRUS	1 CUCUMBER MOSAIC VIRUS	0 BEAN POD MOTTLE VIRUS	0 SOYBEAN CYST NEMATODE
0 COWPEA YELLOW MOSAIC VIRUS	0 BACTERIAL CANKER	0 CERCOSPORA LEAF-SPOT	0 STING NEMATODE
0 RUST	0 SOUTHERN BLIGHT	0 ROOT ROT	2 OTHER (Specify) Blackeye Cowpea Mosaic Virus

13. INSECT (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

0 MEXICAN BEAN BEETLE	1 COWPEA APHID	1 COWPEA CURCULIO	1 STINK BUGS
1 LESSER CORNSTALK BORER	0 EUROPEAN CORNBORER	0 CORN EARWORM	0 BEET ARMYWORM
1 THRIPS	1 SERPENTINE LEAF MINERS	OTHER (Specify) _____	

14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant size	Mississippi Silver	Plant habit	Mississippi Silver
Pod size	Colossus	Plant pigmentation	Knuckle Purple Hull
No. days to maturity	Colossus	Seed coloration	Colossus

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for completing this form:

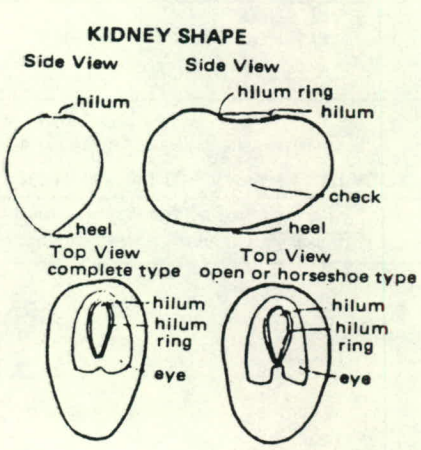
1. C. V. Piper, 1912, Agricultural Varieties of Cowpea and Related Species, U.S.D.A., Bulletin No. 229.
2. L. L. Ligon, 1958, Characteristics of Cowpea Varieties, Oklahoma State University, Bulletin B-518.
3. W. J. Spillman and W. J. Sando, 1929, Mendelian Factors in the Cowpea, papers of the Michigan Academy of Science, Arts and Letters, Vol. XI.

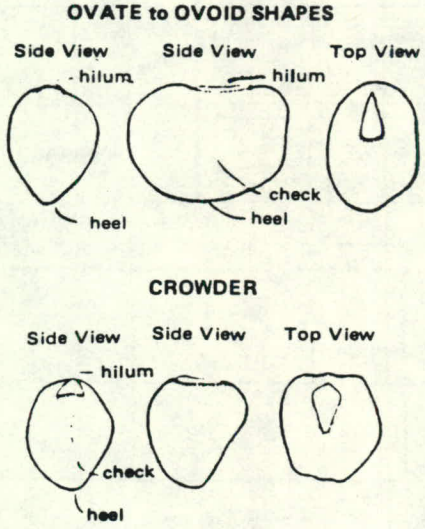
LEAF COLOR: Any recognized color chart may be used to determine the leaf color of the described variety. The following cowpea varieties may be used as a guide to identify colors listed:

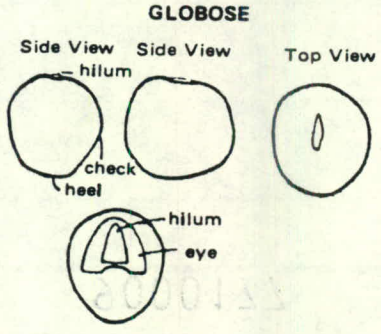
1. Light Green - Texas Cream 40
2. Medium Green - Big Boy
3. Dark Green - California Blackeye #5.

FLOWER COLOR: White flower should be treated with a one percent solution of hydrochloric acid to determine if anthocyanin is present. If color appears as a result of the test, classify as tinged.

TERMS USED TO DESCRIBE SHAPES:







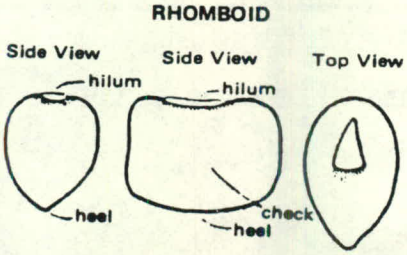


EXHIBIT D

CLEMSON PURPLE VARIETY DESCRIPTION

Plant:	Height -- 21 inches; spread -- 29 inches; habit of growth -- erect; stems -- coarse, thick; branches -- short, few, coarse; foliage -- coarse.
Flowers:	Standards -- purple with two yellow spots at base; wings -- purple; keel -- white.
Pods:	Borne well above foliage; color -- purple and dark green changing to dark purple at green shell stage; size -- short (6.5 inches) and very broad (.47 inches); straight; 16 peas per pod; maturity -- medium (66 days).
Peas:	Size -- very large (71.3 gm per 100 peas); crowder shape; color -- light green changing to a light greenish yellow at green shell stage.
Seed:	Size -- very large * (25.2 gm per 100 seed); shape -- crowder, plump and rounded; seed coat -- smooth; color -- light brown; hilum ring -- dark brown.
Yield:	In a three-year trial at Clemson, Clemson Purple has matched the performance of both Colossus and Mississippi Silver. Both are standard varieties for South Carolina.

DISEASE REACTION:

Viruses:	BlCMV -- resistant, CCMV -- susceptible; CMV -- susceptible; CPMV -- susceptible; CSMV -- susceptible; SBMV-CS -- susceptible.
Nematodes:	Meloidogyne incognita Race 3 -- resistant.
Fungi:	Clemson Purple has been grown for 3 years in a fusarium wilt nursery. This variety did not exhibit symptoms typical of fusarium wilt. It is, therefore, evaluated as having field resistance to this fungus disease.

* For comparison with other varieties, and seed size distribution see:
Ogle, W.L., W. Witcher and O.W. Barnett. 1987. Descriptors for southern peas of South Carolina. SC Agr. Exp. Sta. Bull. 659. (Enclosed)

9000177

EXHIBIT E

STATEMENT OF OWNERSHIP

Clemson Purple was developed by Dr. W. L. Ogle, Professor of Horticulture, Clemson University and released by the South Carolina Agricultural Experiment Station on November 23, 1988 to South Carolina Foundation Seed Association, agent for Clemson University. The seed has been increased and will be offered to home gardeners for trial plantings in 1990. No publication has been issued to date for this variety.